S. Hrg. 101-830

THE COUNTERFEIT DETERRENCE ACT OF 1990

HEARING

BEFORE THE

COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS UNITED STATES SENATE

ONE HUNDRED FIRST CONGRESS

SECOND SESSION

ON

S. 2748

TO AUTHORIZE THE SECRETARY OF THE TREASURY TO ADOPT DISTINCTIVE COUNTERFEIT DETERRENTS FOR EXCLUSIVE USE IN THE MANUFACTURE OF UNITED STATES SECURITIES AND OBLIGATIONS, TO CLARIFY EXISTING AUTHORITY TO COMBAT COUNTERFEITING, AND FOR OTHER PURPOSES

JULY 13, 1990

Printed for the use of the Committee on Banking, Housing, and Urban Affairs

U.S. GOVERNMENT PRINTING OFFICE

33-408 WASHINGTON : 1990

For sale by the Superintendent of Documents, Congressional Sales Office
U.S. Government Printing Office, Washington, DC 20402

S241-54

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THE COUNTERFEIT DETERRENCE ACT OF 1990—S. 2748

FRIDAY, JULY 13, 1990

U.S. SENATE,
COMMITTEE ON BANKING, HOUSING,
AND URBAN AFFAIRS,
Washington, DC.

The committee met at 11:10 a.m., in room SD–538, Dirksen Senate Office Building, Senator Donald W. Riegle Jr. (chairman of the committee) presiding.

Present: Senators Riegle, Garn, and D'Amato.

OPENING STATEMENT OF CHAIRMAN RIEGLE

The CHAIRMAN. Let me invite the witnesses who are here to testify today to please come up and take their seats, and let me welcome them and others who are present.

The legislation that we are considering today is S. 2748, the Counterfeit Deterrence Act of 1990, introduced on June 18 by myself and Senator Garn at the request of the administration.

The purpose of this bill is to authorize the Secretary of the Treasury to adopt distinctive counterfeit deterrents and to clarify existing authority to combat counterfeiting. Because of recent advances in computer technology in color copiers and color laser printers, the Treasury Department and the Secret Service feel that counterfeiting will become a crime of convenience for many and afford professional counterfeiters such sophisticated means of producing passable notes that counterfeiting may well greatly increase.

S. 2748 would also make it illegal to retain computer images of likenesses of Federal Reserve Notes and other obligations such as Treasury checks. While I agree that these technological advances pose serious problems in terms of illegal activity, I am aware of the needs of legitimate business and personal use of such technologies in general terms. So we must balance the needs of the Government on the one hand while protecting the rights of law-abiding citizens on the other.

Because the threat of using sophisticated computers and color copiers to counterfeit is a real threat. Title 18 of the U.S. Code, does need to be revised. Since S. 2748 was introduced in June, my staff and Senator Garn's staff, representing both sides of the committee, the full committee, have worked closely with the Treasury Department to come up with language that addresses its needs and

concerns, while protecting the rights of law-abiding citizens and businesses.

[Copy of proposed bill S. 2748 follows:]

II

101ST CONGRESS
2D SESSION

S. 2748

To authorize the Secretary of the Treasury to adopt distinctive counterfeit deterrents for exclusive use in the manufacture of United States securities and obligations, to clarify existing authority to combat counterfeiting, and for other purposes.

IN THE SENATE OF THE UNITED STATES

JUNE 18 (legislative day, JUNE 11), 1990

Mr. RIEGLE (by request) (for himself and Mr. GARN) introduced the following bill; which was read twice and referred to the Committee on Banking, Housing, and Urban Affairs

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A BILL

To authorize the Secretary of the Treasury to adopt distinctive counterfeit deterrents for exclusive use in the manufacture of United States securities and obligations, to clarify existing authority to combat counterfeiting, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Counterfeit Deterrence Act of 1990".

SEC. 2. Chapter 25 of title 18, United States Code, is amended by—

(a) inserting the following new section immediately before section 471:

"§ 470. Electronic means

"For the purposes of this chapter, the term 'other thing' or 'thing', from which a counterfeit is printed or may be printed, or which is fitted, used or intended to be used or fitted in the making of counterfeits, shall specifically include any electronic means which is used for the acquisition, recording, retrieval, transmission, or reproduction of any obligation or other security, unless such use is authorized by law, the Secretary of the Treasury, or some other proper officer of the United States."; and

(b) inserting after section 474 the following new section:

"§ 474A. Deterrents to counterfeiting of obligations and securities

"(a) Whoever has or retains in his control or possession, after a distinctive paper has been adopted by the Secretary of the Treasury for the obligations and other securities of the United States, any similar paper adapted to the making of any such obligation or other security, except under the authority of the Secretary of the Treasury or some other proper officer of the United States, shall be fined not more than $5,000 or imprisoned not more than fifteen years, or both.

"(b) Whoever has or retains in his control or possession, after a distinctive counterfeit deterrent has been adopted by the Secretary of the Treasury for the obligations and other securities of the United States by publication in the Federal Register, any similar feature or device adapted to the making of any such obligation or other security, except under the authority of the Secretary of the Treasury or some other proper officer of the United States, shall be fined not more than $5,000 for each violation, or imprisoned not more than fifteen years, or both.

"(c) As used in this section—

"(1) The term 'distinctive paper' includes, but is not limited to, any distinctive medium of which currency is made, whether of wood pulp, rag, plastic substrate or other natural or artificial fibers or materials; and

"(2) The term 'distinctive counterfeit deterrent' includes, but is not limited to, any ink, watermark, seal, security thread, optically variable device, or other feature or device in which the United States has an exclusive property interest, or which is distinct from any other similar feature or device by its design, color or other specifications, and which the Secretary designates as being of value in preventing the counterfeiting of obligations or other securities of the United States.".

SEC. 3. Section 474 of title 18, United States Code, is amended by—

(a) striking "United States; or" at the end of the sixth paragraph and inserting in lieu thereof, "United States—"; and

(b) striking the seventh paragraph.

SEC. 4. Section 504 of title 18, United States Code, is amended—

(a) in subparagraph (D) by striking the comma at the end thereof and inserting instead a period;

(b) in paragraph (1) by striking from the text following subparagraph (D) the words "for philatelic" and all that follows through "albums).";

(c) by redesignating paragraph (2) as paragraph (3) and inserting after paragraph (1) the following new paragraph:

"(2) The provisions of this section shall not apply to, or permit the reproduction of illustrations of obligations or other securities, by or through electronic means used for the acquisition, recording, retrieval, transmission, or reproduction of any obligation or other security."; and

(d) striking from paragraph (3), as redesignated, the phrase "but not for advertising purposes except philatelic advertising,".

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SEC. 5. The analysis of chapter 25 of title 18, United States Code, is amended—

(a) by inserting before the item relating to section 471 the following:

"470. Electronic means."; and

(b) by inserting after the item relating to section 474 the following:

"474A. Deterrents to counterfeiting of obligations and securities.".

The CHAIRMAN. Penalties for counterfeiting have been increased from fines of $5000 to $50,000 and prison terms of 15 to 20 years, or both.

I am anxious to hear from the witnesses of the revisions that Senator Garn and I have proposed S. 2748 to balance the concerns of the Treasury Department and the private sector's need for legitimate use of this technology and retention of computerized images.

The witnesses who will speak about the counterfeiting problem and the proposed substitute language are: Mr. Carl D'Alessandro, Assistant Director for Operations of the Bureau of Engraving and Printing; Mr. William Ebert, Special Agent in Charge—Counterfeit Division of the U.S. Secret Service; and Mr. Kenneth Wasch who is the Executive Director of the Software Publishers 'Association, and who is here to present the views of the private sector.

Gentlemen, welcome. We will start right down the table with your statements.

STATEMENT OF CARL D'ALESSANDRO, ASSISTANT DIRECTOR FOR OPERATIONS, BUREAU OF ENGRAVING, WASHINGTON, DC

Mr. D'ALESSANDRO. Good morning, Mr. Chairman. Thank you for the invitation to present the views of the Bureau of Engraving and Printing with regard to the proposed counterfeit deterrence legislation S. 2748.

The overriding objective in the production, distribution, and control of coin and currency is to protect its integrity as a universally acceptable financial medium of exchange. Counterfeiting therefore is a very serious threat to the health of the currency system.

Recent advances in reprographic technology pose a new and substantial threat of counterfeiting. New and rapid advances in reprographic technology are capable of copying documents, including currency and other securities, in color and with remarkable accuracy and clarity.

The introduction of such equipment makes counterfeiting a crime of opportunity for anyone with access to such equipment. The potential counterfeiter no longer requires any particular expertise in printing, but only the inclination and the electronic devices.

The Bureau of Engraving and Printing believes that the committee draft of S. 2748 is meritorious and will provide a vehicle which will allow this country to protect its currency. The committee print balances the legitimate needs and interests of the private sector computer and reprographic industries with those of the Federal Government.

This legislation establishes an exclusive Government right in the manufacture, control, distribution, and use of the deterrent in the colors and designs adopted. In addition, enactment of this legislation would provide for the specific recognition of the illegality of using electronic means in connection with the manufacture of counterfeit Government securities.

The Secretary of the Treasury is the Government official designated by the Congress to identify and adopt counterfeiting safeguards and deterrents best calculated to protect the United States

and the public from fraud or loss due to the counterfeiting of currency.

This bill would extend to new counterfeit deterrents the same protection currently afforded to the distinctive paper adopted by the Secretary for the production of currency, and would enable the Bureau to exert specific security and accountability controls over the supply, shipment, and use of a counterfeit deterrent device.

Through the adoption of a special counterfeit deterrent the mere possession of that deterrent without the specific authorization of the Secretary is criminally prohibited.

While the advances in the more conventional photographic technologies such as color copiers have grown significantly, other reprographic equipment and techniques have taken exponential leaps in sophistication. The designs which presently constitute currency notes and other securities are not just images but a collection of electronic information which can be easily read through the technique of electro-optical scanning.

We are presenting several examples of counterfeit currency notes which were produced using a variety of electronic and photocopying techniques. Examples of high resolution imaging—which I have brought a copy of here [indicating], which is perhaps too small to see at this distance——

The CHAIRMAN. No. Actually, we can see it pretty well.

Mr. D'ALESSANDRO. In this particular example——

Senator GARN. It is far enough away that we can see it well better than if it were up close. [Laughter.]

Mr. D'ALESSANDRO. The portion on the left is a digitized image which represents all the small squares which can then be enhanced. In this particular application, one could change the grey scale and the white range to enhance the note image on the right.

The desirable characteristics of this equipment are that no film is needed. Therefore, the image may be reproduced from digitized data and that a raised image can be prepared simulating the intaglio printing process.

A final example is of a currency note which was produced on a laser copier. This might bear close reviewing. However, this is a note made on a photocopier. The features which make this copier desirable as a counterfeiting tool are that copies can be made on plain paper of varying thickness. It performs near-perfect front-to-back registration, reduces and enlarges, allowing one to make corrections to the image, and copies can be made directly from digitized data.

The committee has also asked the Bureau of Engraving and Printing to address certain specific questions concerning new anti-counterfeiting devices to be incorporated into currency and associated costs involved in that program. Attached to my statement, and submitted for the record, are answers to questions three and four.

Thank you again for this opportunity to present our views of the proposed legislation. At this time, I will be available to answer any questions you may have.

[The complete prepared statement of Carl V. D'Alessandro follows:]

STATEMENT BY CARL V. D'ALESSANDRO
ASSISTANT DIRECTOR (OPERATIONS)
BUREAU OF ENGRAVING AND PRINTING
BEFORE THE SENATE BANKING COMMITTEE
JULY 13, 1990

Good morning. Thank you for your invitation to present the views of the Bureau of Engraving and Printing with regard to the proposed counterfeit deterrence legislation S.2748.

The overriding objective in the production, distribution, and control of coin and currency is to protect its integrity as a universally acceptable financial medium of exchange. Counterfeiting, therefore, is a very serious threat to the health of a currency system. Recent advances in reprographic technology pose a new and substantial threat of counterfeiting. New and rapid advances in reprographic technology are capable of copying documents, including currency and other securities in color and with remarkable accuracy and clarity. The introduction of such equipment makes counterfeiting a crime of opportunity for anyone with access to such equipment. The potential counterfeiter no longer requires any particular expertise in printing, but only the inclination and the electronic devices.

The Bureau of Engraving and Printing believes that the committee draft of S.2748 is meritorious and will provide a vehicle which will allow this country to protect its currency. The committee print balances the legitimate needs

and interests of the private sector computer and reprographic industries with those of the federal government. This legislation establishes an exclusive government right in the manufacture, control, distribution, and use of the deterrent in the colors and designs adopted. In addition, enactment of this legislation would provide for the specific recognition of the illegality of using electronic means in connection with the manufacture of counterfeit government securities. The Secretary of the Treasury is the government official designated by the Congress to identify and adopt counterfeiting safeguards and deterrents best calculated to protect the United States and the public from fraud or loss due to the counterfeiting of currency. This bill would extend to new counterfeit deterrents the same protection currently afforded to the distinctive paper adopted by the Secretary for the production of currency, and would enable the Bureau to exert specific security and accountability controls over the supply, shipment, and use of a counterfeit deterrent device. Through the adoption of a special counterfeit deterrent the mere possession of that deterrent without the specific authorization of the Secretary is criminally prohibited.

While the advances in the more conventional photographic technology, such as color copiers have grown significantly, other reprographic equipment and techniques have taken exponential leaps in sophistication. The designs which

presently constitute currency notes and other securities are not just images but a collection of electronic information which can be easily read through the technique of electro-optical scanning. We are presenting several examples of counterfeit currency notes which were produced using a variety of electronic and photocopying techniques. Examples of high resolution imaging show the capability of visually reproducing minute printing details, including security threads and even the paper fibers themselves. The desirable characteristics of this equipment are that no film is needed, therefore, the image may be reproduced from digitized data and that a raised image can be prepared simulating the intaglio printing process. A final example is a currency note that was produced on a laser copier, the features which make this copier desirable as a counterfeiting tool are; copies can be made on plain paper of varying thicknesses, performs near perfect front to back registration, reduces and enlarges allowing one to make corrections to images and that copies can be made directly from digitized data.

The committee has also asked the Bureau of Engraving and Printing to address certain specific questions concerning new anti-counterfeiting devices to be incorporated into currency and associated costs involved in that program. Attached to my statement, and submitted for the record are answers to questions three and four.

Thank you, again for this opportunity to present our views of the proposed legislation. At this time, I am available to answer any questions you may have.

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DEPARTMENT OF THE TREASURY

RESPONSES TO QUESTIONS POSED BY SENATOR DONALD W. RIEGLE JR
CHAIRMAN, SUBCOMMITTEE ON CONSUMER AND REGULATORY AFFAIRS

July 13, 1990

3) Since 1986, in various newspaper articles, announcements about the debut of new anti-counterfeiting devices have been made; yet, no new currency has been issued to date. What is the current status of the counterfeit deterrence methods proposed in 1986 (mylar strip, micro-engraving around portrait) that the Bureau of Engraving and Printing has been working on?

ANSWER: The security thread (mylar strip) and microprinting have been tested and determined to be effective security features to deter counterfeiting with color copiers, laser scanners, and printers. The microprinting is an engraved process and is ready for production when the procurement has been finalized for the threaded currency paper, which provides a unique, state-of-the-art, denominated mylar strip.

In 1987, it was determined that the existing currency paper supplier was unable to produce a sufficient quantity of paper with an embedded mylar strip to meet the technical specifications and high quality standards for U.S. currency, the most widely held and circulated currency in the world. The Bureau of Engraving and Printing then embarked on a carefully

executed procurement process to ensure the continued quality and security of U.S. currency. That lengthy and technically challenging competitive procurement process is in the final stages at this time. Paper samples and written proposals have been received and evaluated, and the cost proposal is undergoing an audit by the Department of the Treasury's Office of the Inspector General, with final negotiations to commence after all audit issues are resolved.

4) How much of the taxpayer's money has been spent on this program?

ANSWER: The Bureau of Engraving and Printing does not receive funds through the Congressional budget process and is financed through a revolving fund based on charges levied on customer agencies. It is reimbursed by the Federal Reserve System for the capital, research and development, and printing costs for currency production.

When the security thread is added to all denominations, with the exception of the $1, the increased cost per note is expected to be a small percentage of the current cost of 2.6 cents per note, the lowest cost in the world for currency production. Over the past five years, the cost associated with the evaluating and testing of the security thread totalled approximately $460 thousand per year.

The CHAIRMAN. Thank you. We were just looking at these copies you sent up here, and we are trying to see if either of us has a dollar bill that is new enough to be able to really be able to do a comparison to this. But just looking at this, it obviously is different—now we have got two of them. Thanks. [Laughter.]

Here, let me give this back. I think it is fair to say that if somebody had one of these and put a little wear or tear on them and would walk into a 7-11, you could probably pass this off pretty quickly. At least that is the impression I have in looking at it.

I am surprised at the photographic reproduction quality which I think is really extraordinary. It does not feel quite the same as a real dollar in terms of the exact feeling, but it is pretty darn close.

This is one that has been done on bond paper. You get more of the feeling of a real bill. Take a look at that, Senator D'Amato. If you want one for comparison, that is the real McCoy, but is it not amazing? The photographic quality, at least at an initial look, is really I think quite extraordinary.

Senator GARN. How much counterfeiting are you getting of $1 bills, though?

Mr. D'ALESSANDRO. We should have done a $100.

Senator GARN. I understand. But that is one of the reasons at previous hearings on money issues that obviously we have not talked much about $1 bills. That gets back to Treasury wanting to change the method of printing because it is cheaper and easier to counterfeit $1, but it would seem this would make that argument even more moot because of the fact that if you could do that well with a copier, it does not make a great deal of difference what method of printing you use.

Maybe some day we can get back to that and save a lot of money in the printing cost of $1 bills, but recognizing obviously that this process would work on larger bills.

The CHAIRMAN. Let me just inquire before going to the next witness: Do either of my colleagues want to make an opening comment?

Senator GARN. I will put my statement in the record.

Senator D'AMATO. Mr. Chairman, I will just ask that my statement be included.

The CHAIRMAN. Without objection, so ordered.

OPENING STATEMENT OF SENATOR GARN

Senator GARN. Mr. Chairman, I am very interested to hear what the witnesses before us have to say this morning. With technology becoming more and more sophisticated, it's extremely important that anticounterfeiting measures be as up-to-date and current as the abilities of those who would break the law.

The legislation which this hearing will discuss is time-sensitive. The committee is planning to mark up the bill, S. 2748, in the very near future. I look forward to getting more insight into the issues concerning anticounterfeiting from those before us today.

STATEMENT OF SENATOR ALFONSE D'AMATO

Senator D'AMATO. Mr. Chairman, today we consider S. 2748, the Counterfeit Deterrence Act of 1990. This measure is an administra-

tion proposal to respond to increased counterfeiting capability resulting from technological advances.

Counterfeiting has a long and infamous history in the United States. The potential for ill-gotten gains is so great, there has always been incentives to try one's hand at copying greenbacks. Fortunately, the steller work of the Secret Service has kept such activity to a minimum, safeguarding the integrity of the American dollar.

With the advent of new highly sophisticated reprographic technology, the task of detecting counterfeiting activity has become far more difficult. Technology that may permit a rank amateur to accomplish what used to require significant expertise, makes the threat and potential scope of counterfeiting activity far more grave.

This measure will give the Treasury Department needed authority to adopt important distinctive counterfeit deterrents such as watermarks, seals, and security threads, and will criminalize the possession of features and devices similar in form to such deterrents.

I look forward to hearing the testimony of today's panelists.

STATEMENT OF SENATOR ALAN J. DIXON

Senator DIXON. Mr. Chairman, I am pleased to be here this morning and I commend you on holding this hearing on the Counterfeit Deterrence Act of 1990.

In the past few years ever more sophisticated copiers and computers have been manufactured which have the capability of producing incredibly accurate replicas of U.S. paper currency. I share the Treasury departments concern over these developments and its desire to protect the authenticity of U.S. currency.

At the same time, protecting our currency should not be allowed to interfere needlessly with the development and use of high technology equipment and software for legitimate purposes.

I have been told that many criminals involved in drug trafficking and money laundering are also involved in counterfeiting. I strongly support the proposed legislation before the Senate Banking Committee regarding money laundering, legislation which combines the ideas of Senators Kerry, D'Amato, and others and which we will markup next week. I also strongly support the increase in penalties for counterfeiting provided for in the substitute counterfeiting language before the committee today.

I look forward to the testimony of the witnesses from the Software Publishers' Association, the Bureau of Engraving and Printing, and the Secret Service.

The CHAIRMAN. Mr. Ebert.

STATEMENT OF WILLIAM J. EBERT, SPECIAL AGENT IN CHARGE—COUNTERFEIT DIVISION, U.S. SECRET SERVICE, DEPARTMENT OF THE TREASURY, WASHINGTON, DC

Mr. EBERT. Mr. Chairman, committee members, my name is William J. Ebert, Special Agent in Charge of the Counterfeit Division for the U.S. Secret Service, Department of the Treasury.

Pursuant to title 18 of the United States Code, section 3056(b), the United States Secret Service is authorized to detect and arrest

any person who violates any of the laws of the United States relating to coins, obligations, and securities of the United States and of governments both domestic and abroad.

I thank you for the opportunity to address the committee in connection with S. 2748, the Counterfeit Deterrence Act of 1990. I am hopeful that this statement will explain and justify the need for this bill.

I further wish to explain the past counterfeit trends in relationship to recent counterfeit trends to new and innovative technology. In 1989, $13.8 million of counterfeit currency was passed in the United States. Over $75.2 million of counterfeit currency was seized by the Secret Service before it could be placed in circulation. The total of counterfeit currency, all denominations considered, produced in the United States was $89 million.

The Secret Service therefore seized 86 percent of all manufactured counterfeits before they could be passed on to the public.

The distribution of counterfeit currency is up 20 percent from 1988, and up 48 percent from 1987. The amounts seized from individual operations are also rising. To illustrate, in October of 1988 the Los Angeles field office seized $22.6 million from one counterfeit operation alone. In April of 1989, our Santa Ana, California, office seized $9.7 million. And in 1990, our Newark, New Jersey field office seized $10.2 million—that again being one single counterfeit operation.

The number of new notes reported in 1989 was 3,444. This number represents a number of attempts by individuals to counterfeit our currency. So out of that 3,444 attempts, each one of those can represent millions of dollars in actually produced notes.

The foreign statistics are harder to obtain. We know, however, that $103 million in counterfeit U.S. currency was seized abroad during 1989. We also know that 36 percent of all counterfeit currency passed in the United States originated overseas. For the past 20 years, I have been involved in the detection and suppression of counterfeit plant operations. Until recent years, the technology that was generally used to develop a deceptive note was lithography or the offset printing process. The development of new technology, however, has provided counterfeiters with new methods of duplicating currency and securities.

The introduction of multicolored copiers, high-tech computers, and laser scanner printers, and electro-optical scanners has made counterfeiting a crime of opportunity for those with access to such equipment. I have just finished a 10-day seminar that focused on the threat that new technology presents to the integrity of United States and foreign currencies.

This conference was attended by representatives of the U.S. Secret Service, the Bureau of Engraving and Printing, Treasury, and the Federal Reserve Bank System. Also at this conference were representatives from Australia, Great Britain, and Canada.

The purpose of this conference was to examine the effectiveness of present-day counterfeit deterrence and to discuss possible deterrent methods to protect against counterfeiters who had access to the developing technologies such as the multicolored printers and computer laser scanners. Each of these countries at the conference

has experienced counterfeiting of their currency by means of multicolored copiers and/or computer scanners.

While computer laser scanning technology is in its initial stages of becoming a serious threat to the security of the United States and foreign currencies, the Secret Service has already seen the use of such technologies. I have for your examination here a sample of counterfeit currency created by the electro-optical scanning method.

Multiple-colored copying technology has improved greatly over the past few years, and multicolored copiers are becoming common. In turn, so has the use of multicolored copiers for the counterfeiting of currency. The instances where multicolored copiers have been used in a counterfeit plant operation have doubled in the past year alone.

Last year the Secret Service suppressed 92 counterfeit plant operations in the United States. Of that 92, 21 of the plants produced counterfeit notes on the office machine copiers. Last year we arrested 224 persons for violations relating to the illegal use of multicolored copiers in counterfeiting currency.

We also have for your examination a counterfeit created by a multicolored copier.

The Department of the Treasury is in the process of developing a new counterfeit deterrent in connection with the Bureau of Engraving and Printing and the Federal Reserve Bank System in hopes of developing new counterfeit deterrent features. In particular, this year you will see two new security devices in $50 and $100 Federal Reserve Notes. These will be low-level deterrents that will inhibit the threat of counterfeiting by means of a multicolored copier.

The new security features involve the addition of a security thread and microprinting around the portrait. The Counterfeit Division is presently establishing a new section to work with the Department of the Treasury, Bureau of Engraving and Printing, and the Federal Reserve System to identify any new additional deterrents to combat the threat of counterfeiting through the use of computer laser scanners and similar technology.

I would like to note that our concern is not so much what these systems can do today, but what we have come to realize their capabilities will be tomorrow. Just as the counterfeiting of currency by multicolored copiers has increased greatly over the past few years, so will the use of computer laser scanners as a means to scan, store, and subsequently counterfeit currency.

At the four-nations' conference I received briefings from companies that are leading the industry in computer laser scanning technology. Representatives spoke for such companies as ITEK, Dainippon Screening, Ltd., and Crosfield. The presentation left no doubt as to the future threat of counterfeiting by laser scanning and subsequent printing.

As I have shown you, the Secret Service has already seen several new counterfeits produced by computer laser scanning technology. We have had such cases in Philadelphia; Pittsburgh; Columbus, Ohio; Los Angeles; and Rome, Italy.

Many of the Secret Service's concerns relative to increased counterfeiting activity resulting from ever-advancing technology are ad-

dressed in S. 2748. This bill ensures that counterfeiting by any electronic method is a criminal violation. It allows the Secretary of the Treasury to adopt other distinctive counterfeit deterrents.

It provides criminal penalties for the possession of any deterrents so adopted, and enhances criminal penalties with regard to counterfeiting activities.

With regard to the requirement that the Secretary of the Treasury establish a system to allow the legitimate use of electronic methods and the retention of legal reproductions, the Secret Service would have preferred a general prohibition of this activity except as currently permitted under title 18, section 504.

However, given the concerns of the committee, the Secret Service is prepared to accept and operate within the requirements of the bill. The U.S. Secret Service therefore supports the committee's bipartisan language offered as an alternative to S. 2748 as originally introduced.

Thank you for this opportunity to present the Secret Service's position on this pending legislation. If there are any questions I can answer, I will be happy to do so.

[The complete prepared statement of William J. Ebert follows:]

TESTIMONY OF WILLIAM J. EBERT,
SPECIAL AGENT IN CHARGE, COUNTERFEIT DIVISION,
UNITED STATES SECRET SERVICE -- S-2748

Mr. Chairman, Committee Members - My name is William J. Ebert. I am the Special Agent in Charge of the Counterfeit Division for the United States Secret Service, Department of the Treasury. Pursuant to title 18 of the United States Code, section 3056(b), the United States Secret Service is authorized to detect and arrest any person who violates any of the laws of the United States relating to coins, obligations and securities of the United States and of foreign governments.

I thank you for the opportunity to address the Committee in connection with S-2748, the Counterfeit Deterrence Act of 1990.

I am hopeful that this statement will explain and justify the need for this bill. I further wish to explain the past counterfeit trends in relationship to new counterfeit trends brought on by modern technology.

In 1989, 13.8 million dollars of counterfeit currency was passed in the United States. Over 75.2 two million dollars of counterfeit currency was seized by the Secret Service before it could be placed in circulation. The total of counterfeit currency (all denominations) produced in the United States was 89 million dollars. The Secret Service, therefore, seized 86% of all manufactured counterfeits before they could be passed on the public.

The distribution of counterfeit currency is up 20% from 1988, and 48% from 1987. The amounts seized from individual operations are also rising. To illustrate, in October of 1988, the Los Angeles Field Office seized 22.6 million dollars from one counterfeit plant operation alone. In April of 1989, our Santa Ana, California office seized $9.7 million, and in 1990 our Newark, New Jersey, field office seized $10.2 million from one counterfeit operation.

The number of new notes reported in 1989 was 3,444. This represents an increase of 53% from 1988. The foreign statistics are harder to obtain. We know, however, that 103 million dollars in counterfeit U.S. currency was seized abroad during 1989. We also know that 36% of all counterfeit currency passed in the United States originates overseas.

For the past 20 years I've been involved in detection and suppression of counterfeit plant operations. Until recent years the technology that was generally used to develop a deceptive counterfeit note was lithography, which is the offset printing method. The development of new technology, however, has provided counterfeiters with new methods of duplicating currency and securities. The introduction of multi-colored copiers, hi-tech computers, and laser scanners/printers (electro optical scanners) has made counterfeiting a crime of opportunity for those with access to such equipment.

I have just finished a 10 day seminar that focused on the threat that new technology presents to the integrity of United States and foreign currencies. This conference was attended by representatives of the United States Secret Service, the Bureau of Engraving and Printing, Treasury, and the Federal Reserve Bank system. Also at this conference were representatives from Australia, Great Britain and Canada. The purpose of this conference was to examine the effectiveness of present day counterfeit deterrents, and to discuss possible deterrent methods to protect against counterfeiters who have access to the developing technology such as multi-colored printers and computer laser scanners. Each of the countries at the conference has experienced counterfeiting of their currency by means of multi-colored copiers and/or computer laser scanners.

While computer laser scanning technology/printing is in its initial stages of becoming a serious threat to the security of the United States and foreign currencies, the Secret Service has already seen the use of such technology for counterfeiting purposes. I have for your examination a sample of counterfeit currency created by electro optical scanning.

*******SHOW NOTE *********

Multi-colored copier technology has improved greatly over the past few years and multi-colored copiers are becoming common. In turn, so has the use of multi-colored copiers for the counterfeiting of currency. The instances where multi-colored

copiers have been used in a counterfeit plant operation have doubled in the past year alone. Last year the Secret Service suppressed 92 counterfeit plant operations in the United States. Of that number, 21 of the plants produced counterfeit notes on office machine copiers. Last year we arrested 224 persons for violations related to the illegal use of multi-colored copiers in counterfeiting currency. I also have for your examination a counterfeit created on a multi-colored copier.

********** SHOW NOTE **********

The Department of the Treasury is in the process of developing new counterfeit deterrent features. In particular, this coming year will see two new security devices in $50 and $100 Federal Reserve Notes. These will be low-level deterrents that will inhibit the threat of counterfeiting by means of a multi-colored copier. The new security features involve the addition of a security thread and microprinting around the portrait.

The Counterfeit Division is presently establishing a new section to work with the Department of the Treasury, Bureau of Engraving and Printing, and the Federal Reserve System to identify additional new deterrents to combat the threat of counterfeiting through the use of computer laser scanners and similar technology. Our concern is not so much what these systems can do today, but what they will be capable of doing tomorrow. Just as the

counterfeiting of currency by multi-colored copiers has increased greatly over the past few years, so will the use of computer laser scanners as a means to scan, store, and subsequently counterfeit currency.

At the Four Nations Conference I received briefings from companies that are leading the industry in computer laser scanner technology (electro optical scanning). Representatives spoke for such companies as ITEK, Dainippon Screen Ltd., and Crosfield. Their presentations left no doubt as to the future threat of counterfeiting by laser scanning/printing. As I have shown you, the Secret Service has already seen several new counterfeits produced by computer laser scanning technology. We have had such cases in Philadelphia and Pittsburgh, Pennsylvania; Columbus, Ohio; Los Angeles, California; and Rome, Italy.

Many of the Secret Service's concerns relative to increased counterfeiting activity resulting from ever advancing technology are addressed in S-2748. This bill ensures that counterfeiting by any electronic method is a criminal violation; it allows the Secretary of the Treasury to adopt other distinctive counterfeit deterrents; it provides criminal penalties for the possession of any deterrents so adopted; and it enhances criminal penalties with regard to counterfeiting activities.

With regard to the requirement that the Secretary of the Treasury establish a system to allow the legitimate use of

electronic methods and the retention of legal reproductions, the Secret Service would have preferred a general prohibition of this activity except as currently permitted under title 18 of the United States Code, section 504. However, given the concerns of the Committee the Secret Service is prepared to accept and operate within the requirements of the bill.

The United States Secret Service, therefore, supports the Committee's bi-partisan language offered as an alternative to S-2748, as originally introduced.

Thank you for this opportunity to present the Secret Service's position on the pending legislation. I will be happy to respond to any questions which you may have concerning this matter.

The CHAIRMAN. Thank you. That was very good testimony and we appreciate you being here.

We would be pleased to hear from Mr. Wasch now.

STATEMENT OF KENNETH A. WASCH, EXECUTIVE DIRECTOR, SOFTWARE PUBLISHERS' ASSOCIATION, WASHINGTON, DC

Mr. WASCH. Good morning. My name is Ken Wasch, and I am executive director of the Software Publishers Association.

The Software Publishers Association is the principal trade association for the PC software industry which today represents 675 member companies representing firms in the consumer education and business software segments. These companies had estimated sales of $3.1 billion in 1989, and they are growing at approximately 20 percent this year.

Mr. Chairman, I would like to thank you for giving the software industry the opportunity to testify in careful opposition to S. 2748. I have characterized my testimony as "careful opposition" because the SPA does not for one moment condone or endorse counterfeiting.

We have worked very closely with both the FBI and the Secret Service in fighting software piracy, and I do not question the goal of S. 2748, that of controlling increasing efforts to counterfeit Federal Reserve Notes.

Mr. Chairman, as you said in your introductory statement to S. 2748, "While [counterfeiting] is a concern, we must also be aware of the needs of legitimate business and personal use of such technology, while protecting the rights of law-abiding citizens."

As presently drafted, the bill makes it a crime merely to control or possess any optically variable device or other feature or device if the Secretary decides it would be of value in preventing the counterfeiting of obligations or other securities of the United States. In practical terms, this can mean that document scanners, desktop computers, a number of software programs, laser printers, and other high tech wonders could be outlawed even though they were in common use everywhere.

While I will accept as a given that these devices might be "of value" to a counterfeiter, I hope that this committee will remember that these items have a number of legitimate uses. With the advent of low-cost, high-quality scanners and desktop publishing systems, images of a non-currency nature can be quickly and easily reproduced, and artistic brochures can be created by small, in-house departments. As an example, let me show you the brochure my publications department recently created for our next conference. I do not know about you, but I am pretty impressed with what our little, very inexpensive desktop publishing system can do. All this comes off a computer and laser printers.

The Treasury Department claims that "the introduction of such equipment is making counterfeiting a crime of opportunity; the potential counterfeiter no longer requires any particular expertise."

You can apply that same logic to the more common, non-criminal purposes to which this equipment is put and you find that the following statement is also true: The introduction of such equipment is making good desktop publishing a reality for many individuals

and small businesses; the potential publisher no longer requires a large budget or any particular expertise. In fact, the only limitation is and should continue to be the publisher's own imagination.

The essence of controlling counterfeiting in our view is not in outlawing useful technology, but rather in controlling the paper and ink which are necessary to print the counterfeit. As presently drafted, S. 2748 would make it a crime to possess items that: (1) are already widely and commercially available; (2) have numerous legitimate uses; and (3) are largely used by individuals and business with no criminal purpose or intent.

It is my recommendation that S. 2748 be amended to take these facts into account. Further, it would be my recommendation that the Secretary be required to designate as deterrents only those items that are necessary and not merely "of value" in preventing the counterfeiting of obligations or other securities of the United States.

I understand that a redraft along those lines has already been prepared by the committee, and I believe the SPA can very strongly support that document.

Desktop publishing technology, like most other technology, can be abused when placed in the hands of individuals with criminal intent. The overwhelming majority of users have no criminal intent, however, and restricting their access to useful technology should not be the goal of either this committee or this Congress.

In summary, we support the redraft which would define "distinctive counterfeit deterrent" as including those features and devices which are not otherwise in commercial use or in the public domain, and which are necessary in preventing the counterfeiting of obligations of the United States.

Again, thank you very much for giving me an opportunity to present my testimony today.

[The complete prepared statement of Kenneth A. Wasch follows:]

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Statement of

Kenneth A. Wasch

Executive Director

Software Publishers Association

on S. 2748

"The Counterfeit Deterrence Act of 1990"

before the

Committee on Banking, Housing and Urban Affairs

of the

United States Senate

Friday, July 13, 1990

Good morning, my name is Ken Wasch, and I am Executive Director of the Software Publishers Association (SPA). The SPA, which was founded in 1984, is the trade association for the PC software industry. SPA's 675 member companies publish innovative programs for the business, education and leisure markets. These companies had combined estimated sales of $3.1 billion in 1989 and by all projections, will experience continued growth during the coming years.

Mr. Chairman, I'd like to thank you for giving the software industry this opportunity to testify in careful opposition to S. 2748, the "Counterfeit Deterrence Act of 1990." I've characterized my testimony as "careful opposition," because SPA does not for one moment condone or endorse counterfeiting. We have worked closely with both the FBI and Secret Service in fighting software piracy, and I do not question the goal of S. 2748 - controlling increasing efforts to counterfeit Federal Reserve notes. In fact, I support the notion that laser-generated images of U.S. currency and securities should not be permissible reproductions. In saying that, however, I do question the broad brush approach proposed in the legislation, because I can see that many heretofore legal activities may now be made illegal.

Mr. Chairman, as you said in your introductory statement for S. 2748, "while [counterfeiting] is a concern, we must also be aware of the needs of legitimate business and personal use of such technology, while protecting the rights of law-abiding citizens." As presently drafted, S. 2748 makes it a crime merely to control or possess any optically variable device or other feature or device if the Secretary decides it would of value in preventing the counterfeiting of obligations or other securities of the United States. In practical terms, this can mean document scanners, desktop computers, a number of software programs, laser printers, and other high tech wonders could be outlawed even though they are in use everywhere.

While I will accept as a given that these devices might be "of value" to a counterfeiter, I hope this Committee will remember that these items also have a number of legitimate uses. With the advent of low-cost, high-quality scanners and desktop publishing systems, there is less need to retype long documents, images of a non-currency nature can be quickly and easily reproduced, and artistic brochures can be created by small, in-house departments. As an example, let me show you the brochure my publications department just created for our next conference. I don't know about you, but I'm pretty impressed by what we can accomplish with our desktop publishing system.

The Treasury Department claims that "the introduction of such equipment is making counterfeiting a crime of opportunity; the potential counterfeiter no longer requires any particular expertise." Apply that same logic to the more common, non-criminal purposes to which this equipment is put and you find that the following statement is also true: The introduction of such equipment is making good desktop publishing a reality for many individuals and small businesses; the potential publisher no longer requires a large budget or any particular expertise. In fact, the only limitation is and should continue to be the publisher's own imagination.

The essence of controlling counterfeiting is not in outlawing useful technology, but rather in controlling the paper and ink which are necessary to print the counterfeit. As presently drafted, S. 2748 would make it a crime to possess items that: (1) are already widely and commercially available; (2) have numerous legitimate uses; and (3) are largely used by individuals and business with no criminal purpose or intent. It is my recommendation that S. 2748 be amended to take these facts into account. Further, it would be my recommendation that the Secretary be required to designate as deterrents only those items that are necessary and not merely "of value" in preventing the counterfeiting of obligations or other securities of the United States. I understand that a redraft along the lines I have suggested has already been prepared by the Committee, and I believe SPA can support that document.

Desktop publishing technology, like most other technology, can be abused when placed in the hands of individuals with criminal intent. The overwhelming majority of users have no criminal intent, however, and restricting their access to useful technology should not be the goal of either this Committee or this Congress.

Again, thank you very much for giving me an opportunity to present testimony on this most critical matter. I am happy to answer whatever questions you may have.

The CHAIRMAN. We are pleased to have it. Just to nail it down for the record, the revision to S. 2748 that we have developed and that we have circulated to the three of you and that you have all testified on just now, starting down with you, Mr. D'Alessandro, you support that? Is that correct?

Mr. D'ALESSANDRO. Yes.

The CHAIRMAN. Mr. Ebert, do you support it, as well?

Mr. EBERT. Yes.

The CHAIRMAN. And Mr. Wasch, you do, as well?

Mr. WASCH. Yes.

The CHAIRMAN. It is nice to see that wonderful unanimity at the table. I think it attests to the good work that has been done by yourselves, the staff, and others who have worked to find an answer to this problem. That can work satisfactorily for all parties, and I think we may now have that.

I thank you for your testimony today. We may have questions for the record to any of the three of you. If we do, we will submit those to you promptly, and if you would get those responses back to us also on a prompt basis.

I want to thank each of you for testifying today. The committee stands in recess.

[Whereupon, at 11:35 a.m., the committee was adjourned, subject to the call of the Chair].

[Additional material supplied for the record follows:]

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TESTIMONY

BY

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July 13, 1990

REGARDING SENATE BILL 2748

COUNTERFEIT DETERRENT ACT OF 1990*

July 13, 1990

INTRODUCTION

Mr. Chairman and members of the Senate Committee on Banking, Housing and Urban Affairs, it is a pleasure to submit this statement on behalf of the several million collectors of coins and currency--numismatics--regarding Senate Bill 2748, the "Counterfeit Deterrence Act of 1990".

I am the Executive Director of the American Numismatic Association. For some nine years I was associated with the Bureau of Engraving and Printing of the U.S. Department of Treasury, the last five years as Director, until April 1988. However, it is as Executive Director of the ANA that I submit this statement.

STATEMENT

Collectors laud and support this proposed legislation as it provides both security and value to U.S. currency. Security is provided by making it a criminal act to possess distinctive paper and counterfeit deterrents, developed by the U.S. Moreover, and close to the hearts of collectors, is the fact that this legislation also allows the redesign of U.S. currency so as to incorporate the much needed anticounterfeit deterrents.

Section #471.a (c) (2) states that, "The term distinctive counterfeit deterrent includes, but is not limited to, any ink, watermark, seal, in which the United States has an exclusive property interest..." (underscoring mine). To accomplish any of the underscored deterrents will most probably require a change to the design of U.S. currency.

The current banknote, which was designed in the mid-1920's, does not allow modern anticounterfeiting techniques to be incorporated. Most anticounterfeit experts today recognize that the best anticounterfeiting devices currently available are: (1) an exact printing registration of different designs, using colored inks on the front and back sides of the note; (2) a watermark identical to the printed engraved portrait; (3) a security thread invisible in direct light but which can be read with indirect light; (4) an optical variable device, that is, a device, which changes colors and/or image when viewed at a different angle; (5) microprinting, possible with a moire effect; and (6) a simple graphic redesign of the banknote to draw users' attention to the anitcounterfeiting features.

Officials of the U.S. Secret Service have preached that deterrents are designed to make it impossible for the amateur to counterfeit and foil, or make it extremely difficult for the professional to counterfeit. Further, these officials have indicated that there has to be a multitude of devices, both covert and visible to add to the degree of difficulty in counterfeiting.

Almost all countries have turned to color and front-to-back registration. Only expensive printing presses can accomplish this printing. Current photocopy machines cannot. Optical variable devices could require a redesign to enhance their effect. Watermarks require a "window", that is, a portion of the note on both the front and back that is clear of ink so that the image can be seen in indirect light.

The Treasury Department has scored a major triumph in its development and announced intent to incorporate a security thread with a particular statement printed on it that can only be read in indirect light. This deterrent will particularly thwart counterfeiters, who ply their trade outside of the U.S.A. However, the current design of the note both obscures the thread or causes it to be overlooked.

None of these deterrents will reach their anticounterfeit potential unless the current banknote is redesigned. Such a redesign will allow the proposed deterrents to be laid out in a format that will allow them to be effective. Our current notes have been in circulation since 1929. The counterfeiting "threat is compounded by the recent exponential advances in other reprographic equipment and techniques" as the transmittal letter by the Treasury Department for this legislation of January 20, 1990 states.

CONCLUSION

As collectors we welcome this legislation for both the security it provides our currency, but also, for its aesthetic and historical value. The principles and history of a country are recounted in the art of banknotes. We seem to have lost the art, majesty and history provided in our National Bank Notes of 1896, Silver Certificates of 1896 and the beautiful $2.00 bill of 1976, depicting "The Signing of the Declaration of Independence" by John Trumball.

Our currency ought to be redesigned to reflect the necessity of the 21st century America. The "tin Lizzy" on the back of the $10 bill harkens to a different time and does not afford the counterfeit detection we need. The legislation before you provides the opportunity to make our currency more secure and more reflective of our great nation.

Thank you, Mr. Chairman, for allowing me to present this statement.

fjl/nn